

Submersible drainage pumps US 75–155 50 mm free passage

Application

The submersible drainage pumps US 75-155 are suitable for dealing with notably contaminated water and capable of handling solids up to 50 mm particle size. With their free passage of 50 mm, these pumps are able to pump solids and fibers quickly, reliably and above all without blockage!

For easy removal of the pumps from deep sumps we recommend the use of our guide rail systems which provide ease of maintenance and inspection. A controllable oil chamber and wear-resistant special mechanical seal ensure a long service life. The integrated winding thermostats protect the motor from overload.

For automatic monitoring of the oil chamber a seal leak control can be connected.

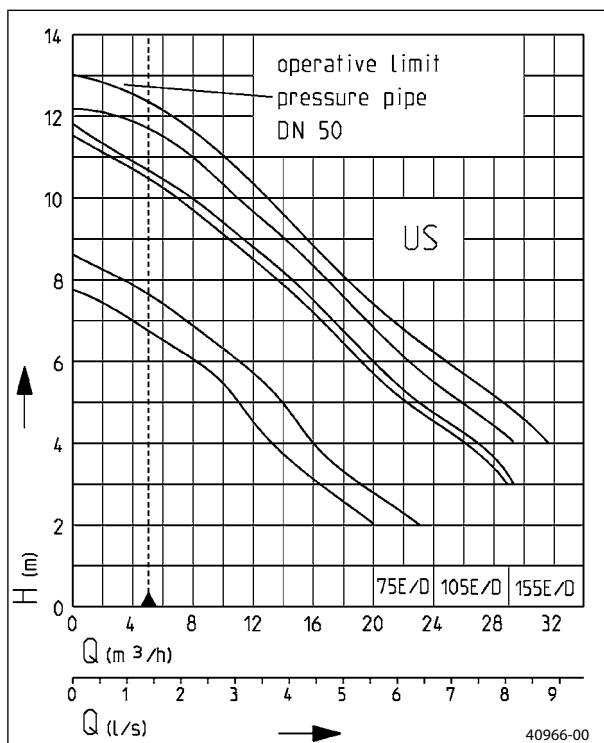
Maximum cable length is 10 m. The US 155 DS 3-phase pump with level control has a CEE-Plug with phase inverter.

The sewage pumps are tested by the German Institute for Construction Engineering and correspond to the valid construction and test principles.

The pumps must not be used for raising sewage from lavatories and urinals.



Performance



We reserve the right to change specifications without notice
Pump performance is subject to ISO 9906 tolerances
The minimum flow velocity in the pressure piping must be 0.7 m/s according to EN 12056.
This data is represented in the performance curve as a limit of application.

- Safe to run dry
- Easy to maintain due to guide rail systems
- 50 mm free passage
- Controllable oil chamber
- SiC mechanical seal independent of rotation direction
- Moisture sealed cable inlet



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Type	Maximum Height x Width x Depth	Discharge branch	Free passage	Cable quality H07RN-F-	Cable length	Weight approx.	Code No.
US 75 E	395 x 200 x 230 mm	2"	50 mm	3G1.0	10 m	13.0 kg	09406
US 75 D	395 x 200 x 230 mm	2"	50 mm	4G1.0	10 m	13.0 kg	09404
US 105 E	425 x 200 x 230 mm	2"	50 mm	3G1.0	10 m	14.5 kg	09410
US 105 D	425 x 200 x 230 mm	2"	50 mm	4G1.0	10 m	15.0 kg	09408
US 155 E*	450 x 200 x 230 mm	2"	50 mm	3G1.0	10 m	16.0 kg	09388
US 155 D*	450 x 200 x 230 mm	2"	50 mm	4G1.0	10 m	16.5 kg	09390
US 75 ES	395 x 240 x 335 mm	2"	50 mm	3G1.0	10 m	13.0 kg	09407
US 75 DS	395 x 240 x 335 mm	2"	50 mm	4G1.0	10 m	13.5 kg	09405
US 105 ES	425 x 238 x 335 mm	2"	50 mm	3G1.0	10 m	15.0 kg	09411
US 105 DS	425 x 238 x 335 mm	2"	50 mm	4G1.0	10 m	15.5 kg	09409
US 155 ES	450 x 240 x 335 mm	2"	50 mm	3G1.0	10 m	16.5 kg	09389
US 155 DS**	450 x 240 x 335 mm	2"	50 mm	4G1.0	10 m	17.5 kg	09391

* without plug ** CEE-Motorprotection with phase inverter

Performance

Type	Delivery head H [m]	2	3	4	5	6	7	8	9	10	11	12
US 75 E/ES	Flow rate Q [m ³ /h]	20	16	13	10	7	4					
US 75 D/DS		23	19	16	12	10	7	3				
US 105 E/ES			28	25	22	19	16	13	10	7	3	
US 105 D/DS			29	26	23	20	17	14	11	8	4	
US 155 E/ES				29	26	22	20	16	14	11	8	2
US 155 D/DS				31	28	25	21	19	16	13	10	6

Electrical Data

Type	Type of current	Voltage Volt	Motor rating kW		RPM min. ⁻¹	Current Ampere	Motor protection	Plug
			P ₁	P ₂				
US 75 E/ES	1-phase	1/N/PE~230	0.83	0.50	2510	3.9	integrated	Safety plug
US 75 D/DS	3-phase	3/PE~400	0.85	0.60	2800	1.4	integrated	CEE-
US 105 E/ES	1-phase	1/N/PE~230	1.37	0.98	2700	6.0	integrated	Safety plug
US 105 D/DS	3-phase	3/PE~400	1.36	1.06	2740	2.4	integrated	CEE-
US 155 E	1-phase	1/N/PE~230	1.60	1.21	2814	7.5	on site*	-
US 155 ES	1-phase	1/N/PE~230	1.60	1.21	2814	7.5	integrated	Safety plug**
US 155 D	3-phase	3/PE~400	1.70	1.41	2815	3.1	on site*	-
US 155 DS	3-phase	3/PE~400	1.70	1.41	2815	3.1	integrated	CEE-**

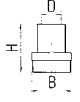




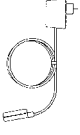
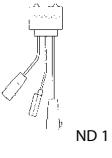







* additional requirements, see technical data or accessories

** Protective motor plug

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Accessories

							Code No.	75 E	75 ES	75 D	75 DS
Pump without plug (for connection to duplex control unit)											
	1	Swing-type check valve DIN EN 12050-4	2" (DN 50), PN 4	H 150	W 120	D 2"	00326	•	•	•	•
		Ball check valve DIN EN 12050-4	2" (DN 50), PN 6	185	155	2"	09857	•	•	•	•
	2	Stop valve	2" (DN 50), PN 16	H 140	W max. 67	D 2"	11838	•	•	•	•
	3	Elastic connection	2" (DN 50), PN 4	H 150	D 63		17194	•	•	•	•
	4	Hose band clamp	2"				03572	•	•	•	•
	5	Elbow 2"					14230	•	•	•	•
	6	Alarm system with submersible ball contact switch, separate, mains-dependent, with potential-free contact and 3 m cable					16723		•		•
		Alarm system ditto , with 9.5 m cable					24434		•		•
		Alarm system for washing-machines with submersible ball contact switch with 3 m cable, separate, mains-dependent					25090	•	•	•	•
		Alarm system for washing-machines ditto , with 9.5 m cable					25091	•	•	•	•
	7	Separate level controls for single unit (see NE level controls for description)									
		NE 1 (1-phase current) with sub. ball contact switch 3.0 m					16710	•			
		NE 2 (1-phase current) with sub. ball contact switch 9.5 m					16711	•			
		ND 1 (3-phase current) with sub. ball contact switch 3.0 m					16712			•	
		ND 3 (3-phase current) with sub. ball contact switch 9.5 m					16713			•	
		NE 1A (1-phase current) with sub. ball contact switch 3.0 m and alarm system					16714	•			
		NE 2A (1-phase current) with sub. ball contact switch 9.5 m and alarm system					16715	•			
		ND 1A (3-phase current) with sub. ball contact switch 3.0 m and alarm system					16716			•	
		ND 3A (3-phase current) with sub. ball contact switch 9.5 m and alarm system					16717			•	
		Counterweight (1 piece)					17541	•		•	
		Duplex control units (see section on level controls for description)									
		BD 00 E (1-phase current)					00482	•			
		BD 00 (3-phase current)					00299			•	
		BD 25 (3-phase current)					00302				
		Subm. switch pack B with 3 subm. ball contact switches w. 9.5 m cable a. fixing devices					16725	•		•	
		BmG with 3 subm. ball contact switches with 9.5 m cable and counterweight					16726	•		•	
		Protective motor plug – 8 A, 230 V (without level control)					40770				
		Protective motor plug – 2.5–4 A, 400 V (without level control)					40773				
	8	Rechargeable battery for off the line operation of the alarm system					07562	•	•	•	•
	9	Seal leak detector DKG					00252	•	•	•	•
	10	Special float assembly for low switching points									
		Switching points US 75 ON/OFF US 105 ON/OFF US 155 ON/OFF					17424		•		•
		without GR 170/120 mm 200/150 mm 225/175 mm									
		with GR 175/125 mm 205/155 mm 230/180 mm									
	11	Chain with 2 rings DIN 766, 2.5 m, 320 kg					19189	•	•	•	•
		Chain stainless steel with 5 rings, 1 shackle NG 10, DIN 766, 2.5 m, 200 kg					23986	•	•	•	•
	12	Shackle A 0.6					13402	•	•	•	•
	13	Guide rail system GR 50 S					40740	•	•	•	•
		Foot strainer , 10 mm free passage					25135	•	•	•	•
		Pump pedestal stainless steel, 50 mm free passage					40632	•	•	•	•

* only for single units ■ only in connection with a motor protection plug ○ Control unit on request

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Technical data

Pump

Vertical, single stage, submersible, open centrifugal impeller, spiral housing with free inlet. Free passage 50 mm, horizontal discharge branch with 2" female thread.

Bearings

Common shaft for pump and motor, with ball bearings, deep groove ball bearing with grease chamber.

Seal

Silicon carbide mechanical seal, oil chamber and duplex rotary seal towards the motor section, safe to run dry, a seal leak control can be connected.

Motor

Submersible, motor type of enclosure IP 68, insulation class B, winding thermostat protects the motor from overload, starting via plug, automatically via mounted circuit or submersible ball contact switches.

US 155: To protect the motor, a correct adjusted motor protecting switch has to be provided in the control unit at site by the customer.

Material

Spiral housing made of GG grey cast iron, power supply through rubber insulated flexible cable.

Terminal board lid, vortex impeller and wear plate made of GRP, motor casing and shaft in stainless steel

Installation

Pump can be installed free standing or in connection with guide rail system GR 50 S einbauen.

Scope of supply

Pump according to DIN EN 12050 ready for connection with 10 m cable. Foot strainer made of GRP enclosed.

US 155: Pumps without level control with free lead end. Pump with level control with CEE-Plug and phase inverter (3-phase) or safety-plug (1-phase).